

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 1-13, 15-17, 21, 23 and 25 have been amended. Claims 3-5, 9 and 10 have been amended to correct formality issues only. The amendments to independent claims 1, 12, 13 and 21 are supported by at least Figures 2-8 and the description at page 9, lines 8-14 of the present application. The amendments to independent claims 2, 6, 7, 11 and 23 are supported by at least Figures 4, 5, 8 and 9 of the present application. No new matter has been added.

Interview Summary

A telephone interview was conducted on December 21, 2005, between Examiner Krishnamurthy, Applicants' attorney Joshua Randall, and inventor John Kielb. Mr. Kielb explained the context for the invention of the present application. The Gibbs reference was discussed in some detail. The parties also discussed some differences between the cited references and the present invention. No agreement was reached as to the allowability of the claims.

§102 Rejection

Claims 1-15 and 18-25 were rejected under 35 U.S.C §102(b) as being anticipated by Gibbs (US 1,098,247). Applicants respectfully traverse this rejection.

Gibbs discloses in Figures 5 and 6 one embodiment of an apparatus for measuring fluid flow through a pipe. The pipes A', A² conveying fluid to and from the stop valve of the apparatus each have a circular cross-section. The stop valve includes a gate C that slides in a gate holder B under adjustment of a crew P and hand wheel Q. The gate holder B has a generally rectangular cross-section that matches the outer dimensions of the gate C to provide sealing off of fluid flow when the gate C is in the closed position. The gate C includes a surface that faces a planar wall of the gate holder B, is exposed to fluid flow when the gate is open, and is aligned parallel with the fluid flow. This surface has a length dimension in the longitudinal direction (shown in Figure 5) that is many times smaller than a width dimension of the surface in the transverse direction to fluid flow (shown in Figure 6).

Gibbs also discloses with reference to Figures 8 and 9 an embodiment that includes a pipe A² with a square cross-section (see Figure 9) and a double gate arrangement with gates C¹,

C^2 moveable into engagement with each other to shut off fluid flow through the pipe. Each of the gates C^1 , C^2 includes a planar surface that faces a planar surface of the opposing gate, is exposed to fluid flow when the gates are open, and is aligned parallel with the fluid flow. Each of these surfaces has a length dimension in the longitudinal direction (shown in Figure 8) that is many times smaller than a width dimension of the surface in the transverse direction to fluid flow (shown in Figure 9).

Therefore, Gibbs fails to disclose "an element having a generally rectangular shaped surface facing the planar inner wall and . . . having a length dimension in the longitudinal direction that is at least as great as a width dimension, as required by claim 6, "an element having at least one planar surface facing one of the at least two planar portions of the second segment and . . . having a length dimension in a longitudinal direction of the conduit that is at least as great as a width dimension of the planar surface," as required by claim 11, or "a planar surface facing a planar sidewall of the second portion, the planar surface having a length dimension in a longitudinal direction of the conduit that is at least as great as a width dimension of the planar surface," as required by claim 23.

Further, the size of the orifice in Figures 5 and 6 that is defined by the gate holder B into which the gate C moves to control fluid flow has a cross-section that is at least as great as the cross-section of the pipes A^1 , A^2 conveying fluid to and from the orifice. The maximum size of the orifice in Figures 8 and 9 that is defined by the relative spacing between the gates C^1 , C^2 when in the fully retracted position has a cross-section that is at least as great as the cross-section of the pipes A^2 . Therefore, Gibbs fails to disclose an orifice "defining a maximum cross sectional area that is less than half a cross sectional area of the conduit," as required by claim 1, a conduit wherein "the inner rectangular cross-section defines a maximum area less than an area defined by the inner circular cross-section," as required by claim 12, a fluid flow conduit that includes a "second portion including at least one planar sidewall and having a maximum cross-sectional area less than a cross-sectional area of the first portion, the second portion," as required by claim 13, or a conduit having "a second portion with a rectangular inner cross-section having a maximum cross-sectional area that is smaller than a cross-sectional area of the first portion," as required by 21.

Gibbs discloses with reference to Figures 5 and 6 a pressure device that includes a manometer F connected by pipes E^1 , E^2 to the pipes A^1 , A^2 . The embodiment of Figures 8 and 9

includes a manometer F open to atmosphere. Gibbs fails to disclose or suggest "first and second sensor chambers configured to receive the first and second pressure sensors, respectively, wherein the first and second pressure sensors are directly exposed to fluid flowing through the conduit," as required by claim 25. The pressure devices disclosed by Gibbs do not include sensors exposed to direct fluid flow, and do not include a housing with pressure chambers configured to receive the pressure sensors. Therefore, Gibbs fails to disclose or suggest every limitation of claim 25.

In view of the above, Applicants submit that Gibbs fails to disclose every limitation of claims 1, 6, 11-13, 21, 23 and 25, and the claims that depend from them.

§103 Rejections

Claim 16 was rejected under 35 U.S.C §103(a) as being unpatentable over Gibbs and further in view of JP 11117915. Claim 17 was rejected under 35 U.S.C §103(a) as being unpatentable over Gibbs and further in view of Roucka (US 1,580,678). Applicants respectfully traverse these rejections. As discussed above, Gibbs fails to disclose or suggest every limitation of claim 13. JP '915 and Roucka fail to remedy the deficiencies of Gibbs as it relates to claim 13. Therefore, claims 16 and 17 are allowable for at least the reason they depend from an allowable base claim. Applicants do not otherwise concede the correctness of this rejection.

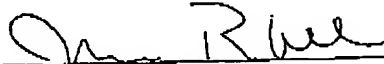
In view of the above, Applicants' respectfully request reconsideration of the application in the form of a Notice of Allowance. If a phone conference would be helpful in resolving any issues related to this matter, please contact Applicants' attorney of record below at 612.371.5387.

Respectfully submitted,

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